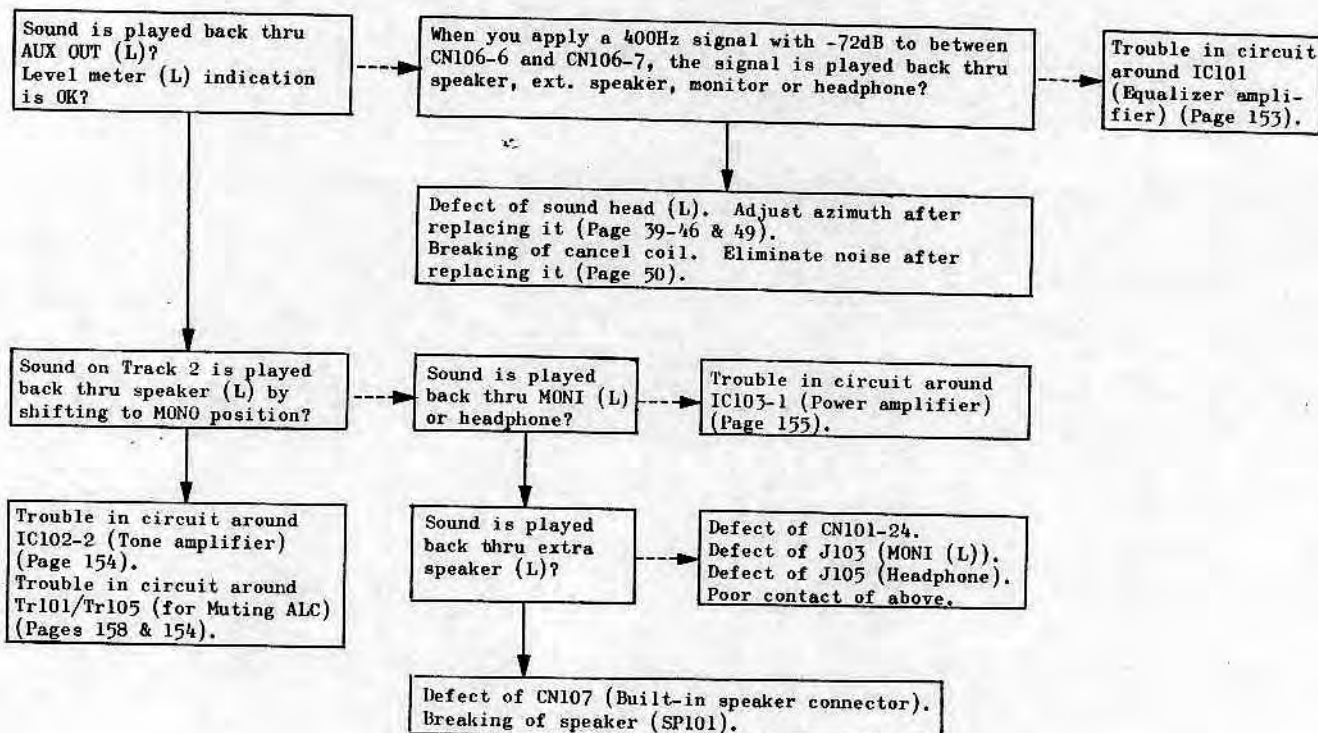
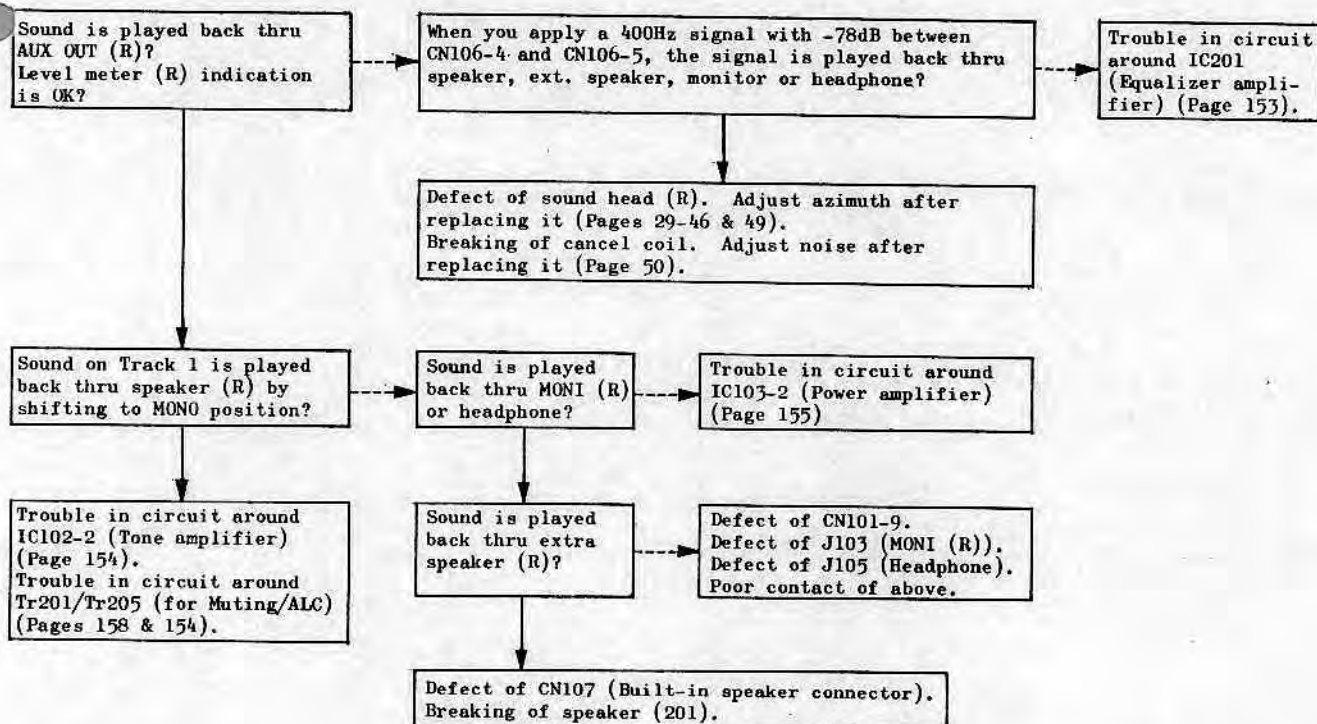


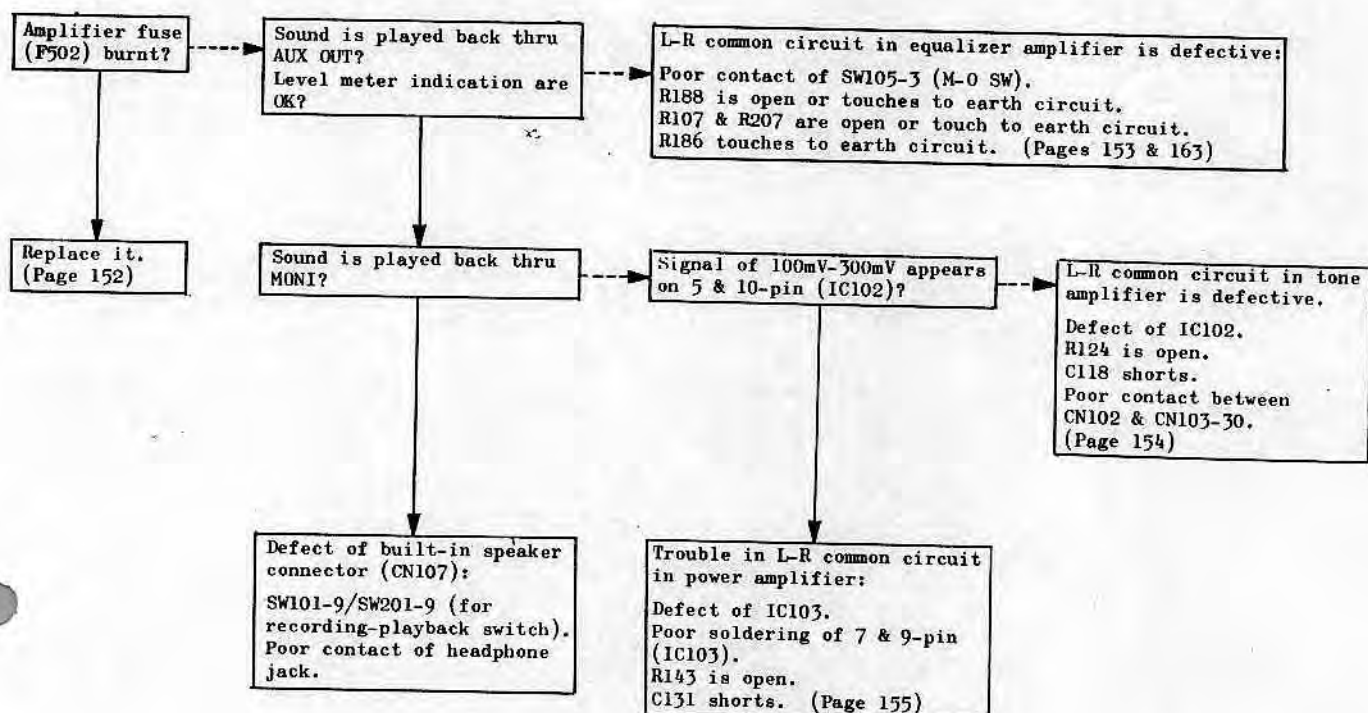
D. Troubleshooting

SOUND ISN'T PLAYED BACK THRU SPEAKER OF L-CHANNELSOUND ISN'T PLAYED BACK THRU SPEAKER OF R-CHANNEL

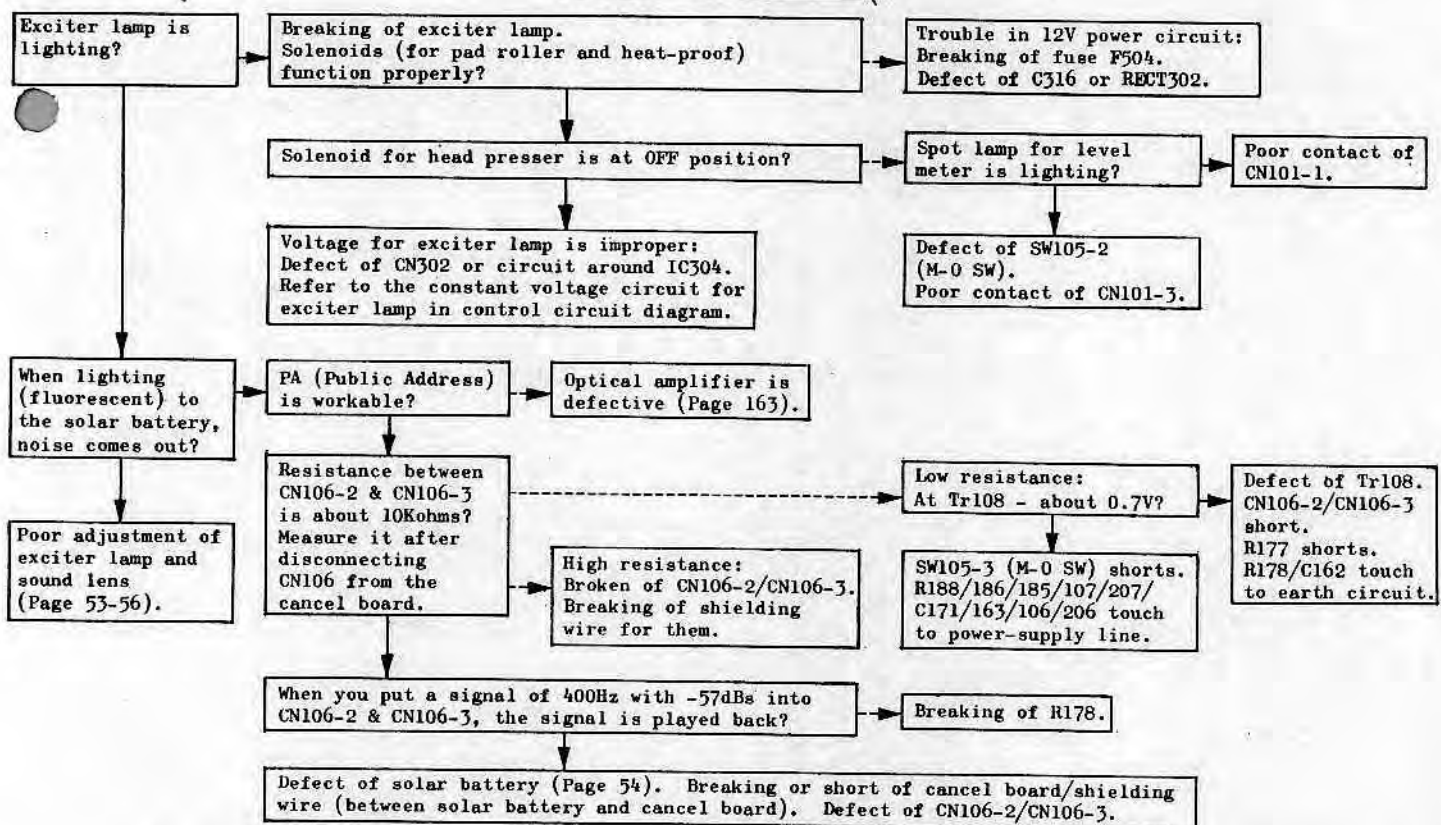
(Refer to R-Channel Circuit corresponding to the reference page in the box)



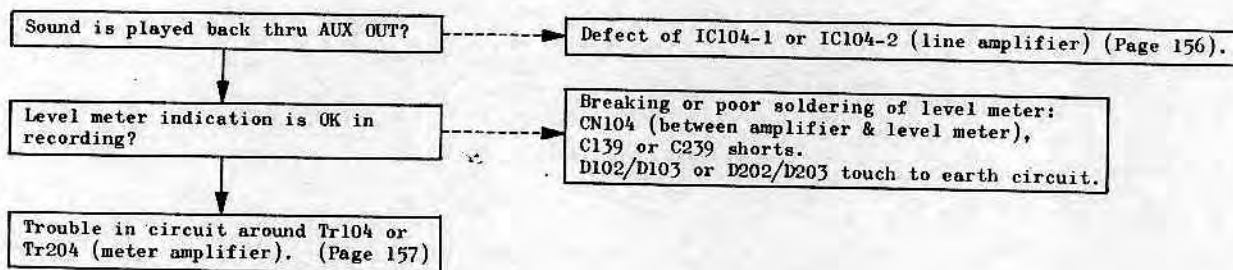
SOUND ON BOTH TRACKS ISN'T PLAYED BACK THRU SPEAKER



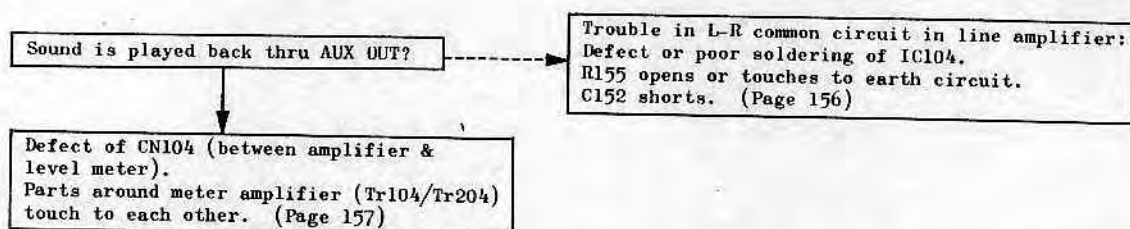
NOT PLAYED BACK OPTICAL SOUND



LEVEL METER (L) OR (R) SHOWS NO INDICATION IN PLAYBACK
(though Sound can be played back thru Speaker)

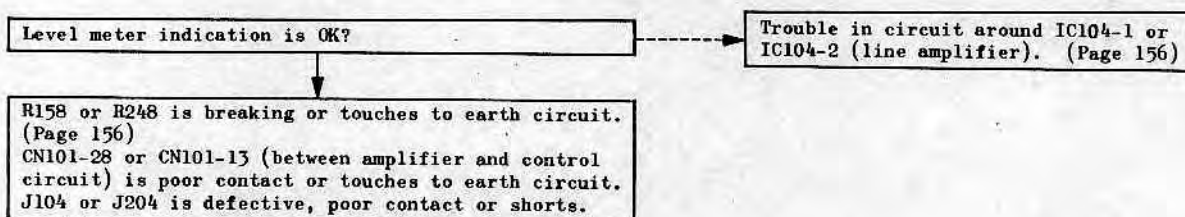


BOTH LEVEL METERS SHOW NO INDICATION IN PLAYBACK
(though Sound can be played back thru Speaker)

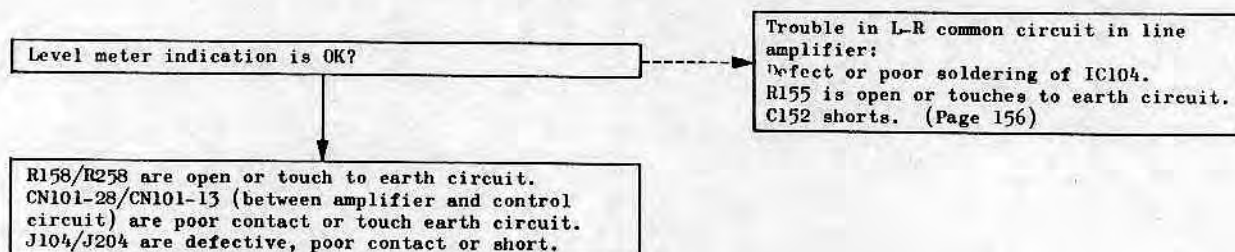


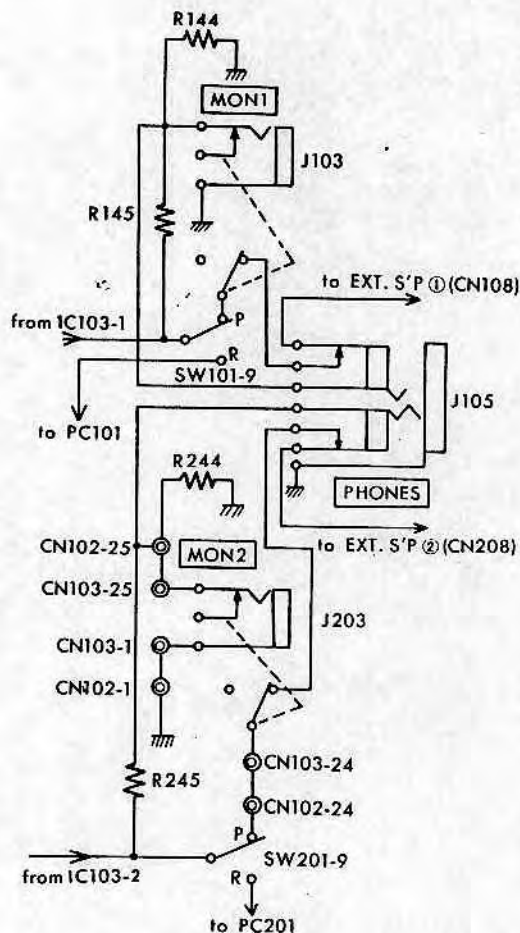
IC104 (1/2 LA3122) of line amplifier is of composite type, so at first check the applied voltage (+20V at 8-pin) circuit when both level meter indicators do not swing.

SOUND ISN'T PLAYED BACK THRU AUX OUT (L) OR (R)
(though it can be played back thru the Speaker)



SOUND ISN'T PLAYED BACK THRU BOTH AUX OUT
(though it can be played back thru the Speaker)





SOUND ISN'T PLAYED BACK THRU MONITOR (L) OR (R)
 (though it can be played back thru Built-in Speaker)

Sound is played back thru headphone jack?

Trouble in Track 1 (L):
 Defect or poor soldering of J103.
Trouble in Track 2 (R):
 Defect or poor soldering of J203,
 Poor contact of CN102-25/CN103-25/
 CN102-1/CN103-1.

Trouble in Track 1 (L):
 R144 shorts or touches to earth circuit.
 R145 is open or touches to earth circuit.
 Defect or short of J103/J105.
Trouble in Track 2 (R):
 R244 shorts or touches to earth circuit.
 R245 is open or touches to earth circuit.
 Defect or short of J203/J105.
 CN102-25/CN103-25 touch to earth circuit.

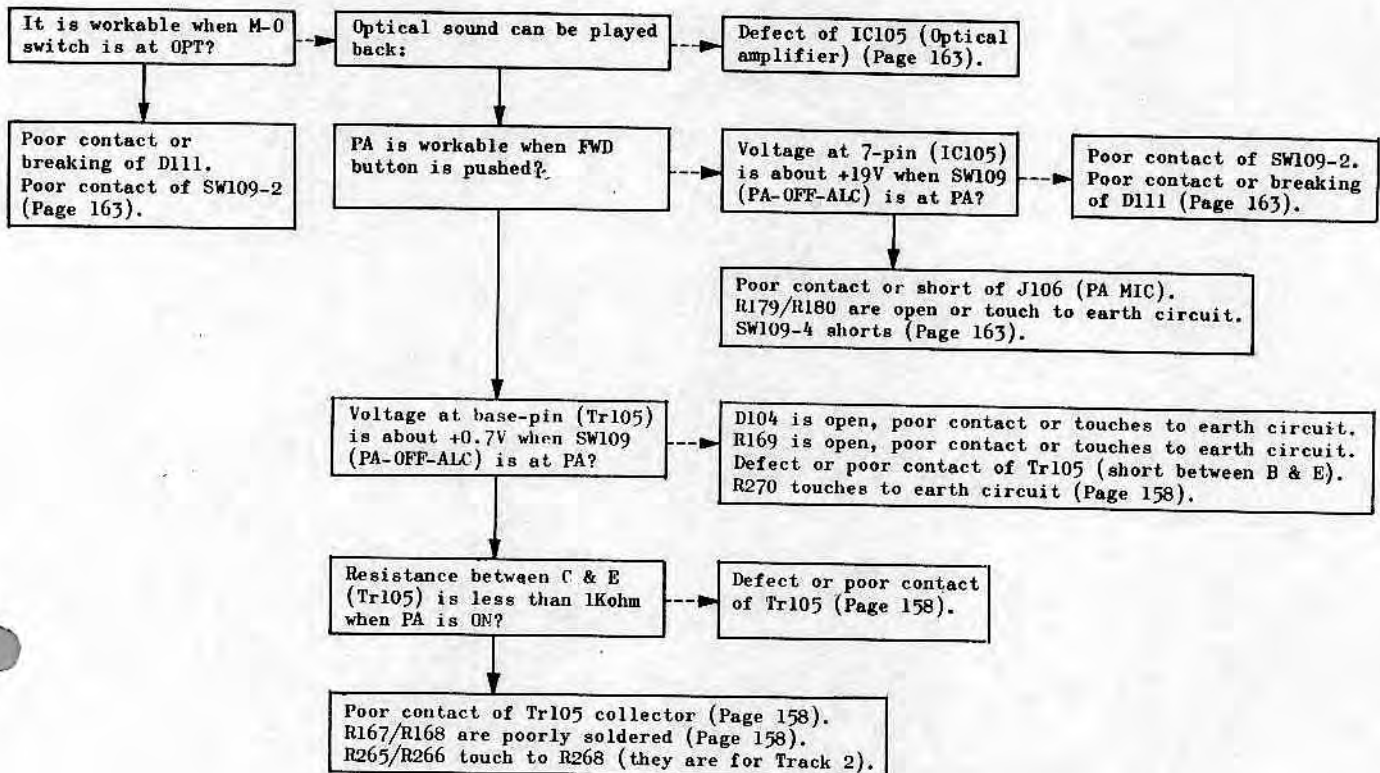
SOUND ISN'T PLAYED BACK THRU HEADPHONE JACK
 (It is OK thru Speaker)

Poor contact or defect of J105 (Headphone Jack)

SOUND ISN'T PLAYED BACK THRU EXTRA SPEAKER
 (It is OK thru Built-in Speaker)

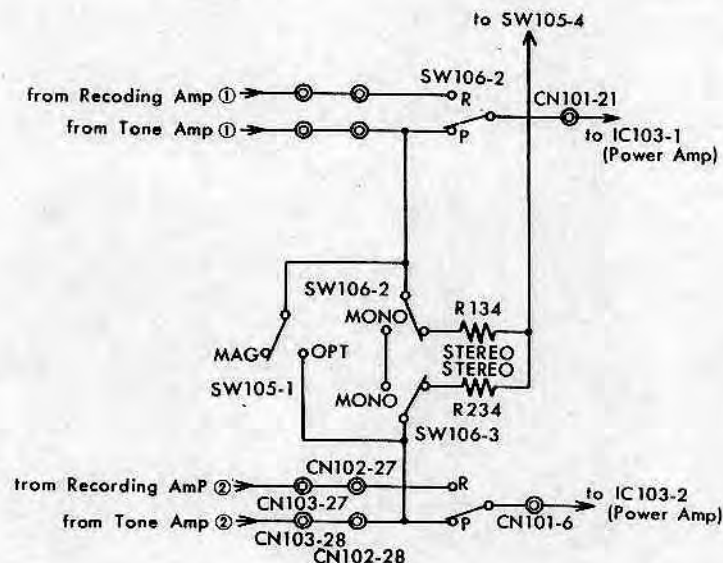
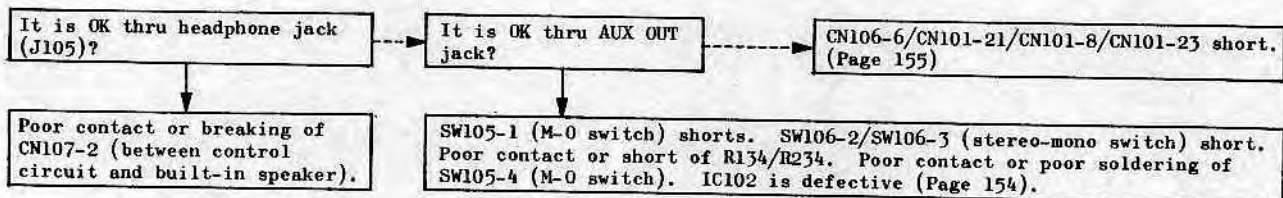
Track 1: Poor contact or defect of CN108.
 Track 2: Poor contact or defect of CN208.

PA (PUBLIC ADDRESS) SYSTEM ISN'T WORKABLE

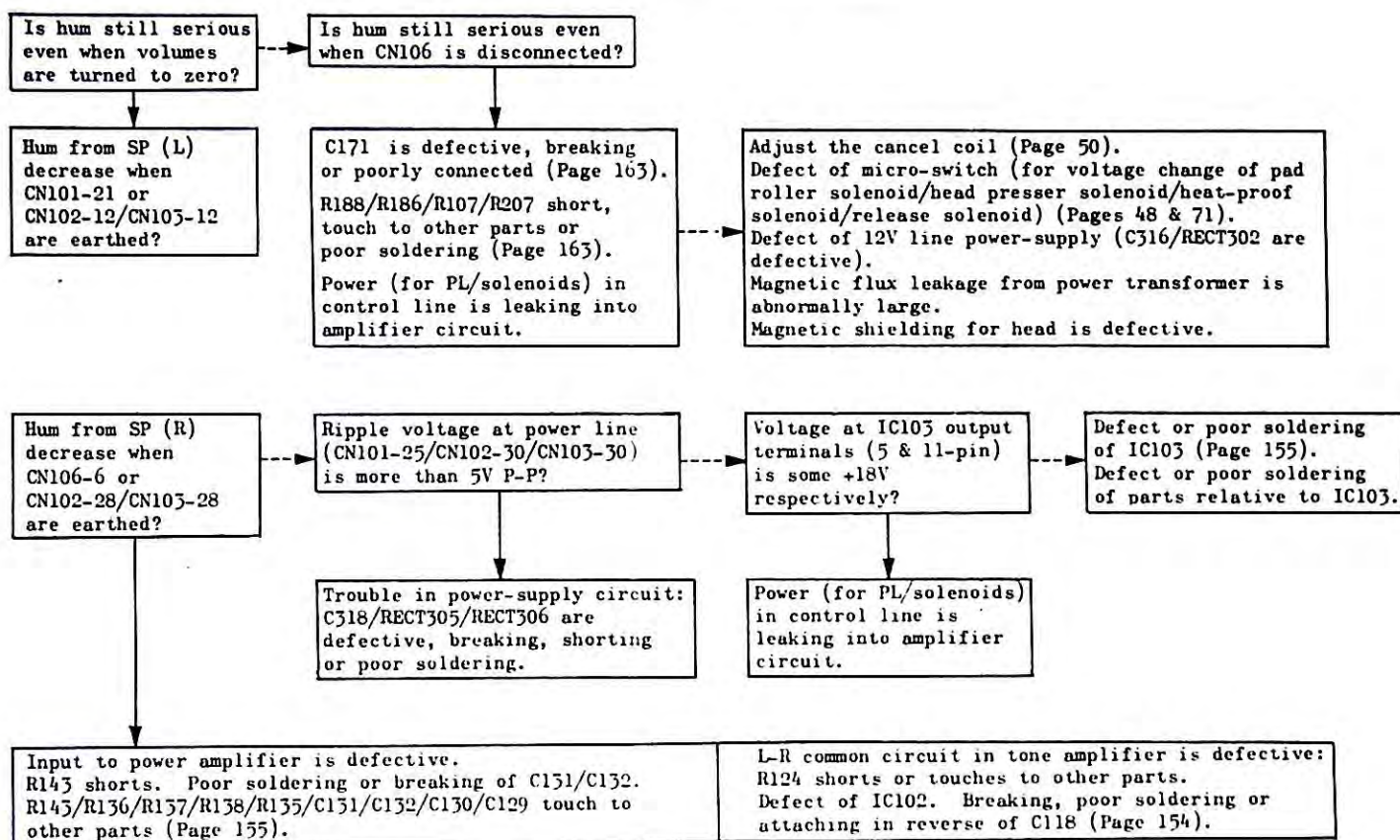


SOUND ISN'T PLAYED BACK IN STEREO

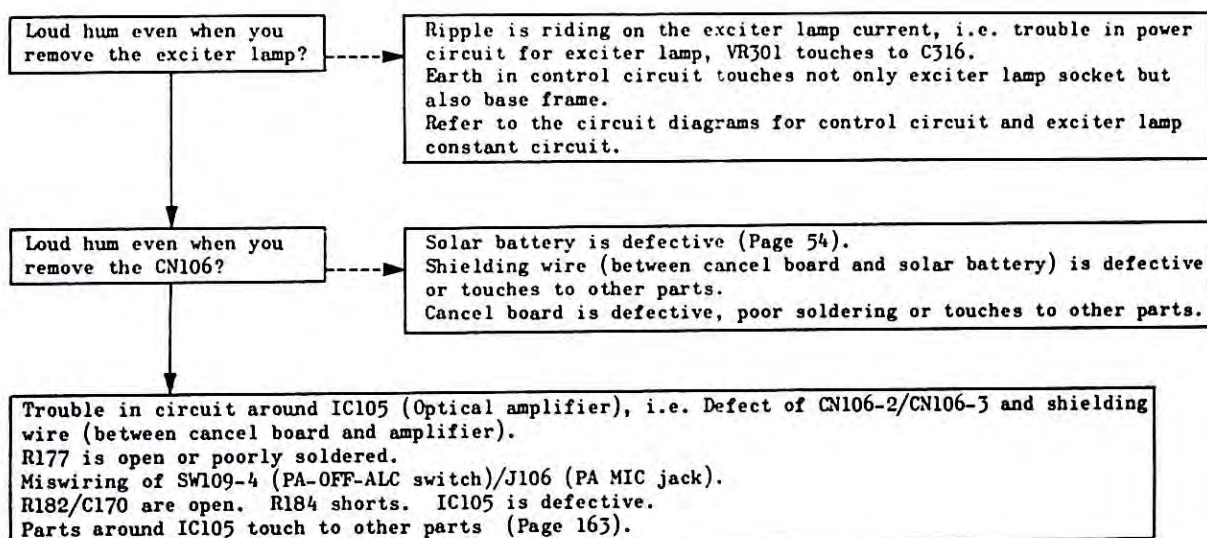
(though Stereo-Mono Selector (SW106) is set at STEREO)



LOUD HUM IS HEARD THRU BOTH SPEAKERS

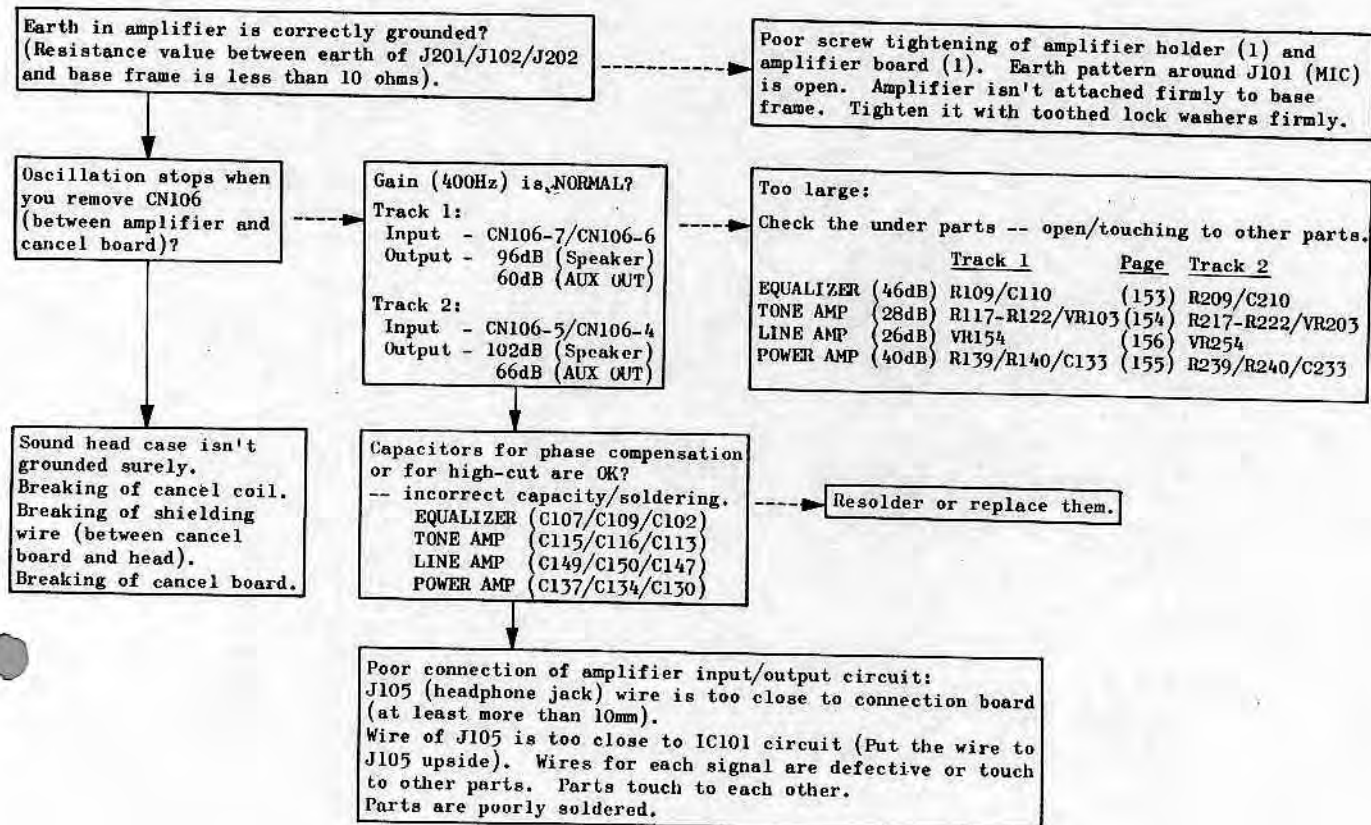


LOUD HUM DURING OPTICAL PLAYBACK

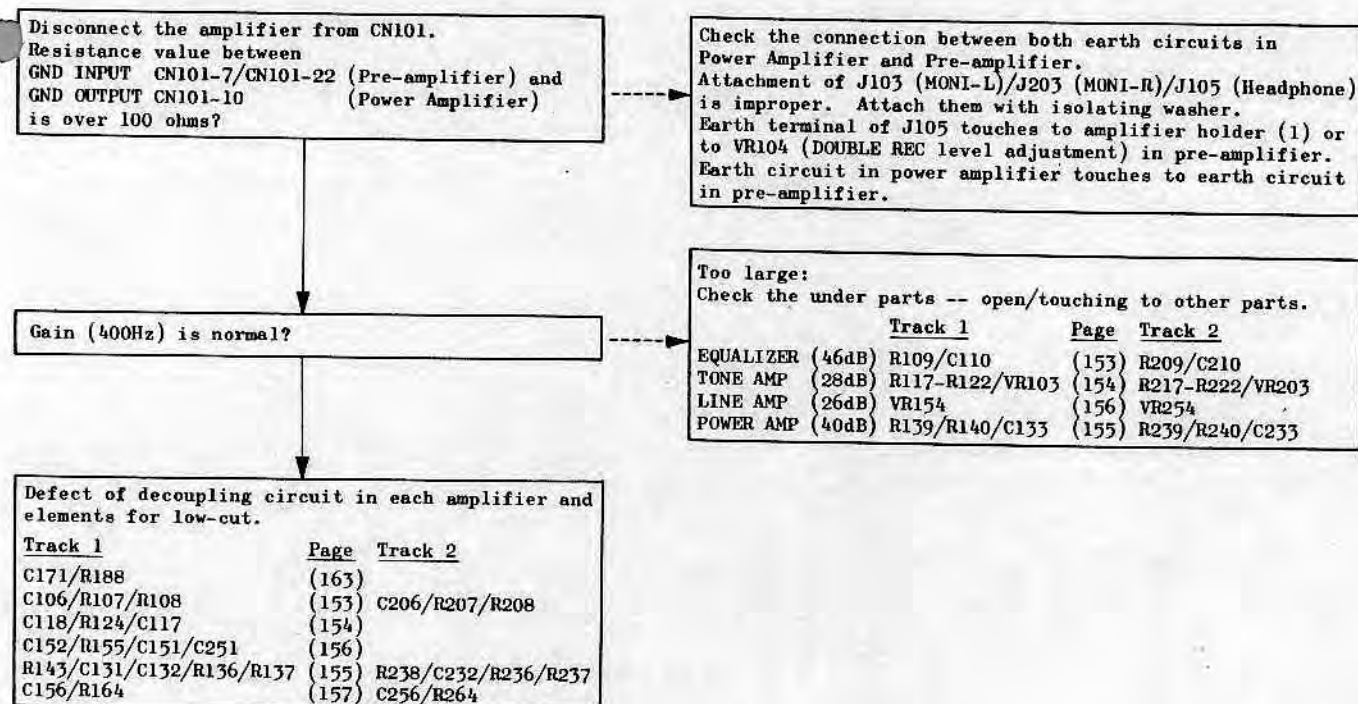


OSCILLATION DURING MAGNETIC PLAYBACK

Oscillation at high frequency range:

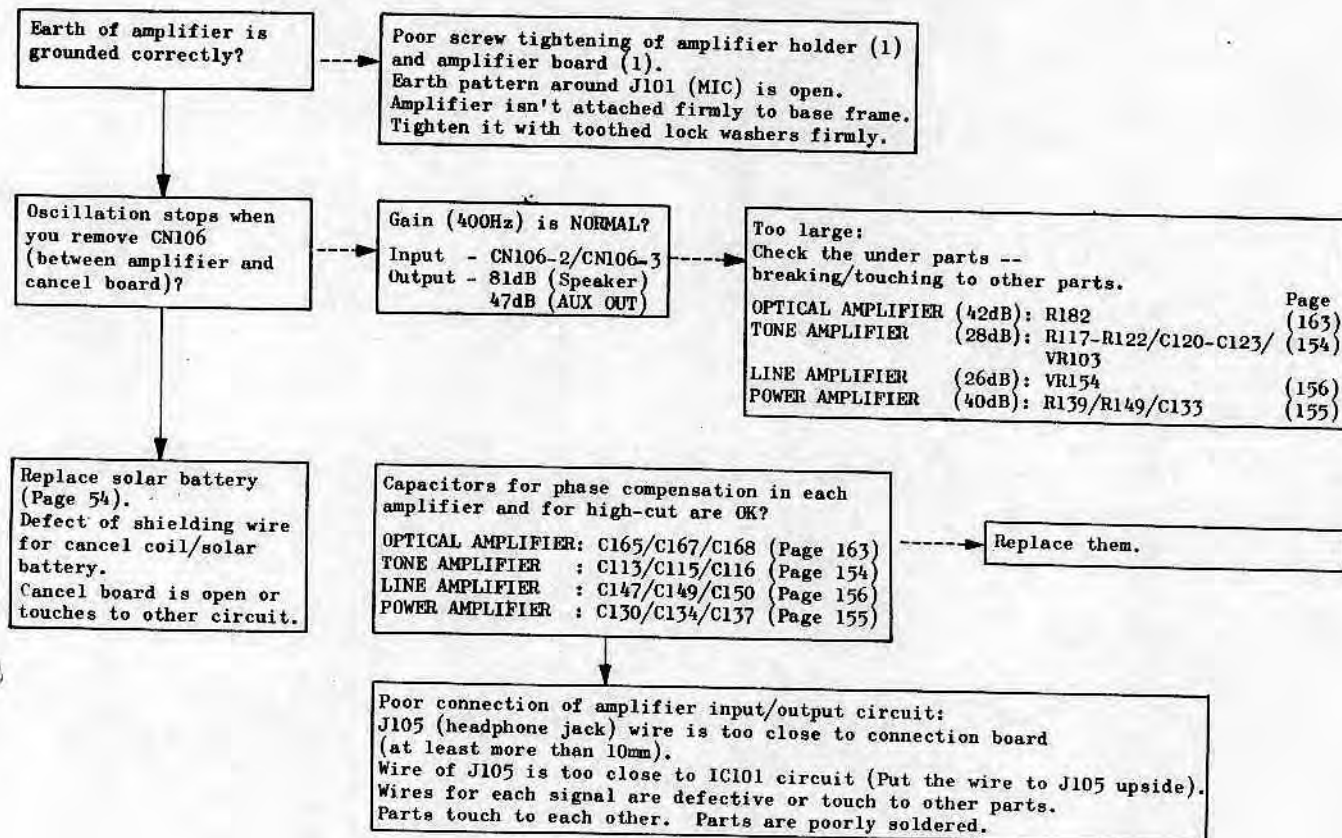


Oscillation at low frequency range:

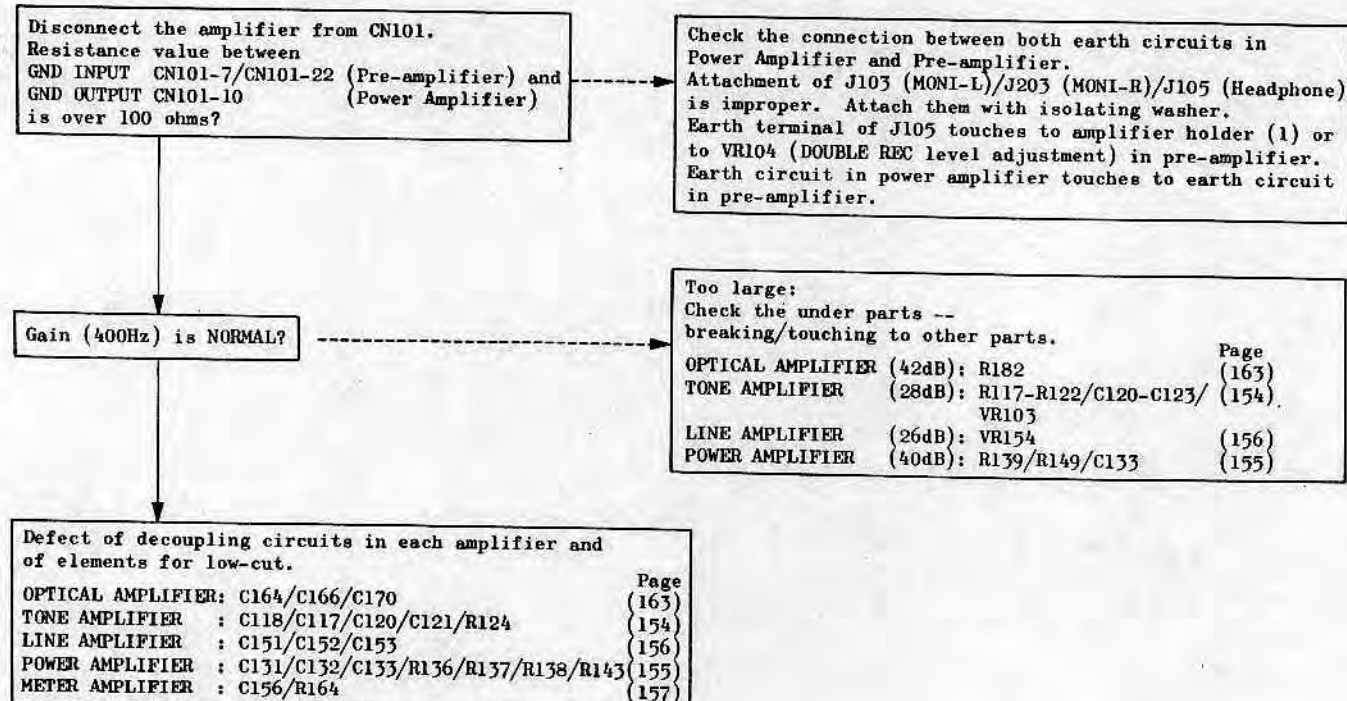


OSCILLATION DURING OPTICAL PLAYBACK

Oscillation at high frequency range:



Oscillation at low frequency range:



MUTING DOESN'T WORK IN PLAYBACK

SW109 (PA-OFF-ALC Switch) is at correct position? ----- Shift the switch to OFF/ALC.

TROUBLE IN TRACK 1:

Voltage at base-pin of Tr101 is +0.7V in operation of REV or OFF?

Tr101 is defective or poorly soldered (Page 158 & 154).

R169/R170/D104/Tr105 touch power-supply line.
R112/R165/R166/R167/R168/C111/C159/Tr101/CN102/CN103-2 touch earth circuit or short (Page 158).

TROUBLE IN TRACK 2:

Voltage at base-pin of Tr201 is +0.7V in operation of REV or OFF?

Tr201 is defective or poorly soldered.

R269/R270/D204/Tr205 touch power-supply line.
R212/R265/R266/R267/R268/C211/C259/Tr201/CN102-16/CN103-16 touch earth circuit or short.

TROUBLE IN BOTH TRACKS:

Remove the amplifier from CN101 (for amplifier and control circuit).
Voltage between CN101-16 & CN101-5 is +3V during STOP or REV? 0V during FWD? +10V during THREAD?

Trouble in control circuit.

Earth line of EXL socket is exactly grounded to base frame?

Earth the EXL socket securely.

Voltage at base-pin of Tr101/Tr201 is +0.7V (Page 158)?
Normal voltage:
+0.7V .. during REC/PA.
0 V .. during other conditions

R168/R268 touch earth circuit.
CN101-5 (for amplifier and control circuit) touches other parts.

SW109-2 (PA-OFF-ALC switch) shorts (Page 163) or touches other parts.
D104/D204 touch other parts (Page 158).

DIFFERENCE (OVER ± 3 dB) OF LEVEL METER INDICATIONS

- on Recording & on Playing Back -

Head touch is OK?

Readjust the head position.
Head is defective.
(Pages 39-46 & 49)

NOTE: Head touch varies with kinds of films, usage frequency of films or curling of films, causing level difference in the meter. The level difference within ± 3 dB, however, is just permissible.

Sound was recorded with proper level?

Bias current is OK?

Readjust the bias
(Pages 162 & 164)

Trouble in circuit of PC101 (photo coupler)/Tr106/PC201/Tr206 (Pages 155 & 161).
R148/C138/D102/R248/C238/D202 are defective.
R149/R150 are defective.

Gain of speaker in playback is OK?

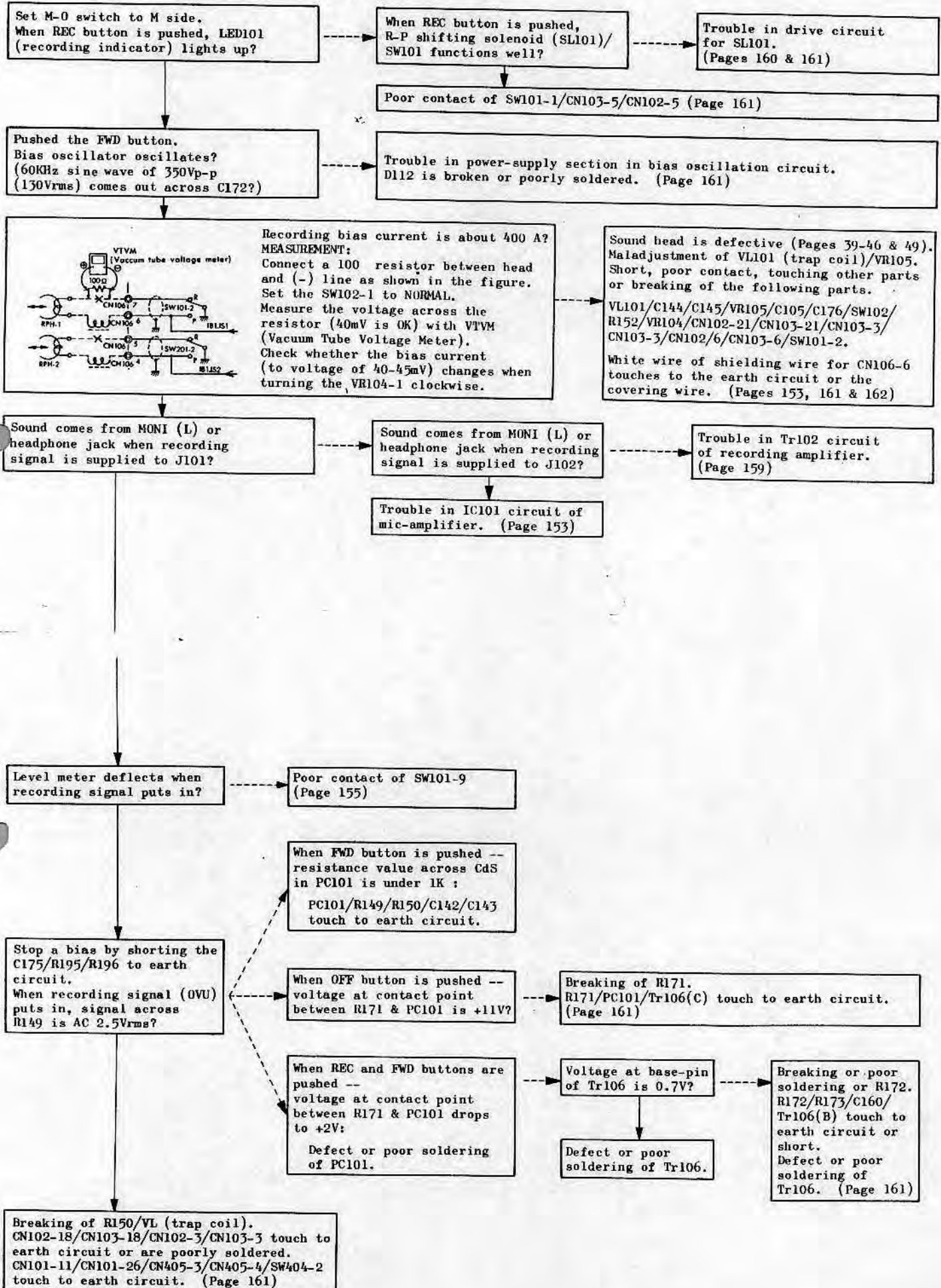
Too large:
Check the under parts -- open/touching to other parts.

	Track 1	Page	Track 2
EQUALIZER (46dB)	R109/C110	(153)	R209/C210
TONE AMP (28dB)	R117-R122/VR103	(154)	R217-R222/VR203
LINE AMP (26dB)	VR154	(156)	VR254
POWER AMP (40dB)	R139/R140/C133	(155)	R239/R240/C233

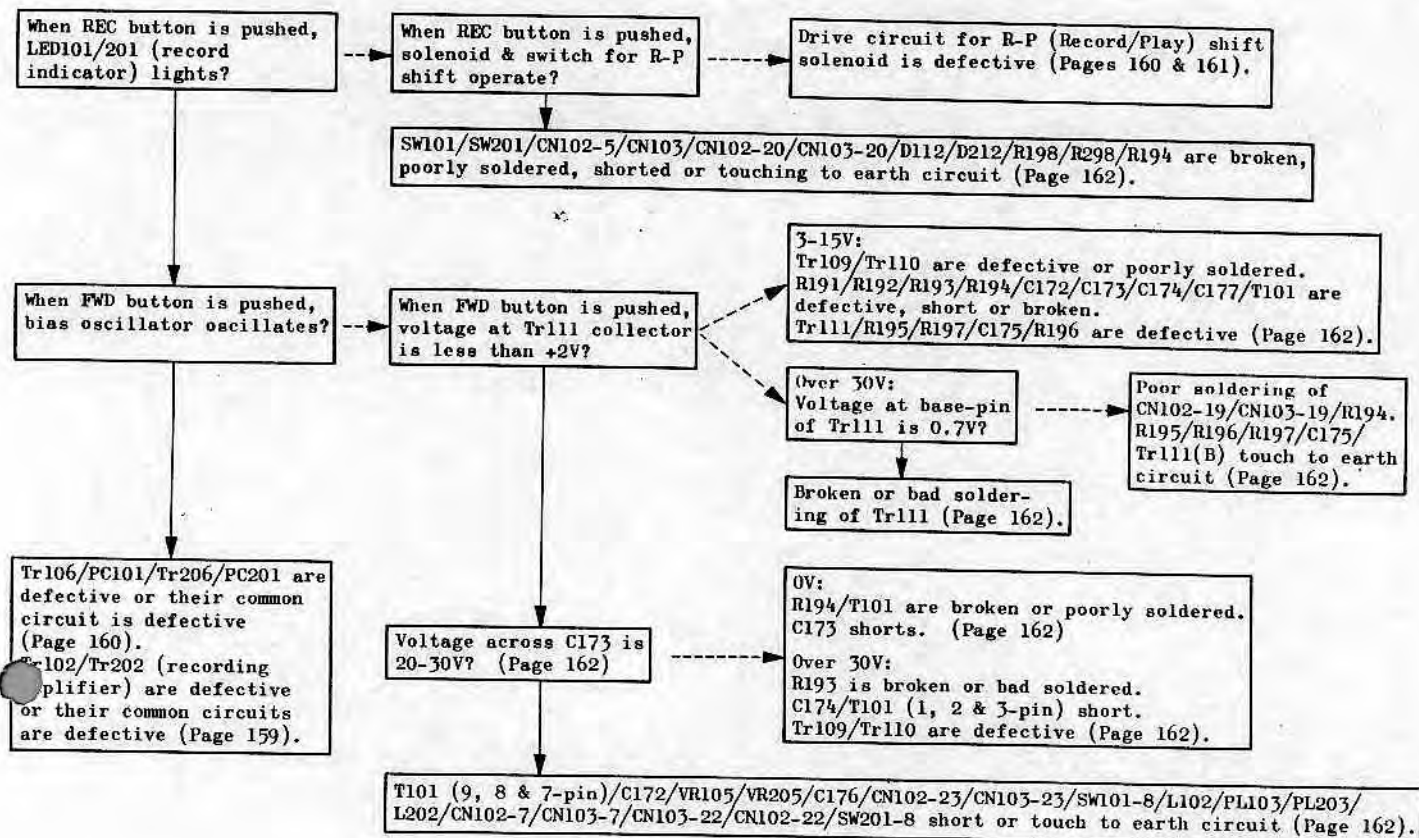
Readjust the VR154/VR254 position.
Replace a 4.7K Ω resistor with a 2.7K Ω resistor (R161/R261) before the readjustment (Page 156).

UNABLE TO RECORD ON TRACK 1 OR 2

Track 1. * (Track 2: Refer to Track 2 Circuit)

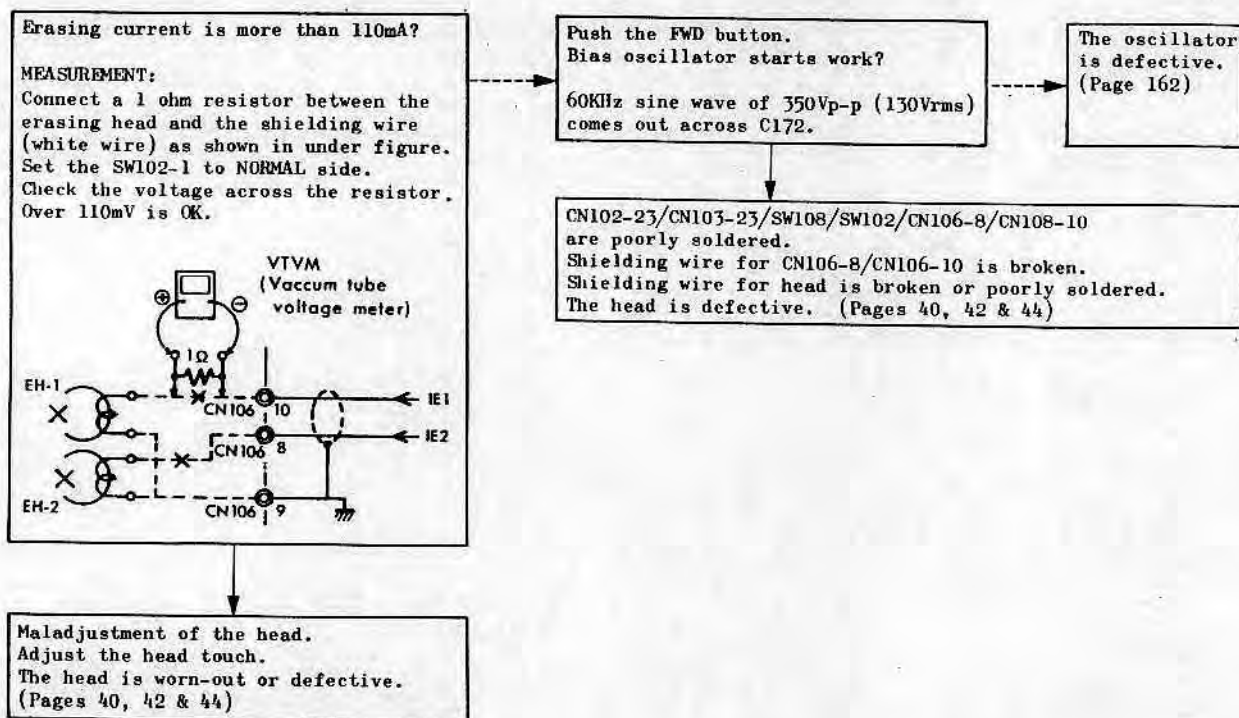


RECORDING IS IMPOSSIBLE ON EITHER TRACK 1 OR 2



UNABLE TO ERASE SOUND ON TRACK 1

* (Track 2: Refer to the Track 2 Circuit)



NORMAL RECORDING IS IMPOSSIBLE

(DOUBLE Recording is OK)

Trouble in Track 1:

SW102-3 touches to other circuits.
Erasing head shorts (Pages 40, 42 & 44).
Cancel board/CN106-10/CN106-8 short.
Shielding wire (between amplifier and cancel board/CN106-10/CN106-9/CN106-8) shorts or touches to the earth circuit.
Shielding wire (between erase head and cancel board) shorts or touches to the earth circuit.

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

ALC IS IMPOSSIBLE

Trouble in Track 1:

Muting on playing back is OK?

Refer to Page 139.

R146/R166/D101 are broken or touching to other parts.
R147/C140/C141 short or touch to other parts.
SW109-3 is poorly soldered. (Pages 155 & 158)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:

C141/C241/D101/D201 short or touch to the earth circuit.
SW106 touches to other circuits.
SW109-3/SW109-1 touch to other circuits.
(Pages 155 & 158)

LEVEL METER DOES NOT WORK ON RECORDING

(Recording is OK)

Trouble in Track 1:

The meter shows indication on playing back?

The meter is defective or broken.
CN104/its wires short or are bad contact.
C139 shorts.
D102/D103 touch to the earth circuit. (Page 157)

R148/D102 touch to the earth circuit or broken.
C138 shorts. (Page 155)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

DOUBLE RECORDING IS IMPOSSIBLE

(NORMAL Recording is OK)

Trouble in Track 1:

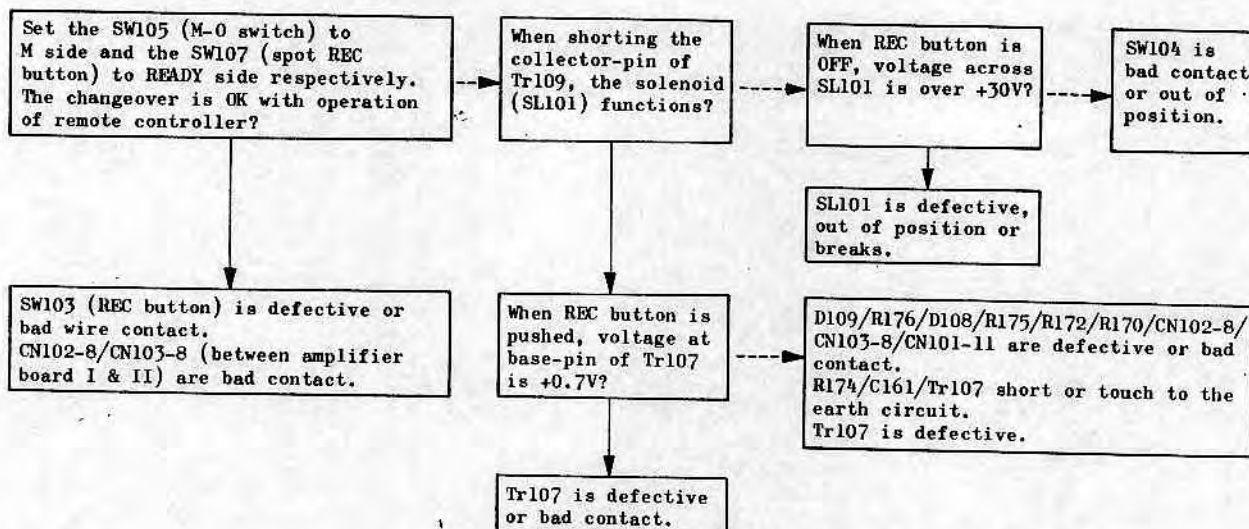
SW102/CN102-21/CN103-21/C176 touch to the earth circuit.
VR104-1 is bad soldering or touches to other parts.
Bad contact of amplifier board I and VR104-1.
L102/SW102-2/SW108 short or touch to the earth circuit. (Page 162)

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

R-P (RECORD-PLAY) SOLENOID DOES NOT WORK

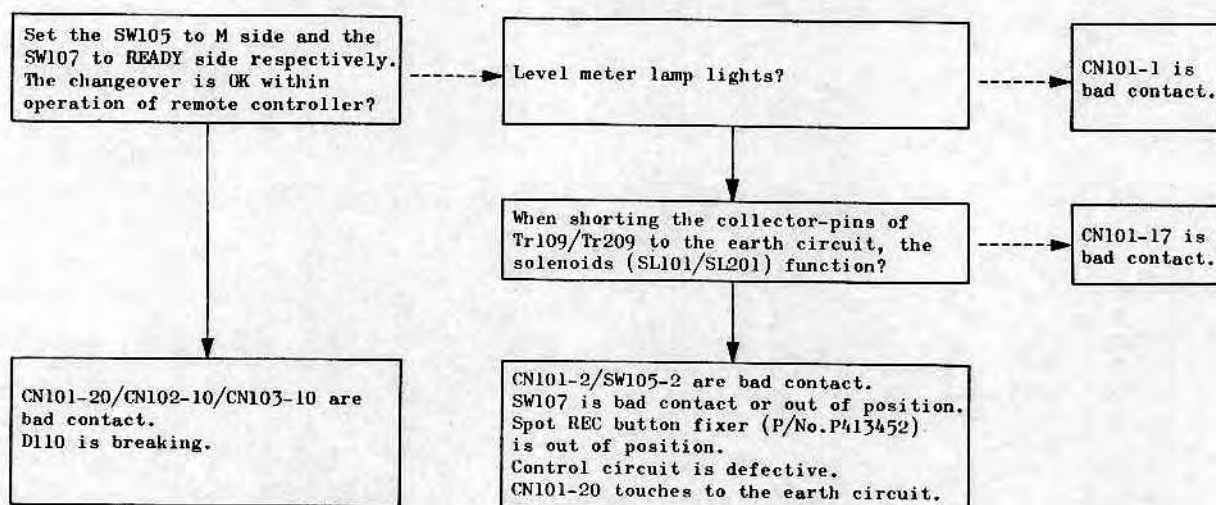
Trouble in Track 1: (Refer to Pages 160 & 161)



Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:



HOLDING (R-P SOLENOID) IS IMPOSSIBLE

Trouble in Track 1:

SW101-7 is broken or bad contact.
D107 is breaking.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above,
referring to the Track 2 Circuit.

Trouble in both Tracks 1 & 2:

SW108/D107/D207/SW101-7/SW201-7/R171/R271/R197/
CN102-19/CN103-7 touch to the other parts.
CN101-19 is bad contact or touches to the other
parts.
Control circuit (periphery of Tr316-Tr319) is
defective.

R-P SOLENOID VIBRATES
WHEN REC BUTTON (SW103) IS PUSHED

Trouble in Track 1:

D105 is defective, breaking or bad contact.
Tr107/R107 are bad contact.
SL101 is bad contact or out of position.
SW104 is out of position.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above,
referring to the Track 2 Circuit.

SPOT RECORDING IS IMPOSSIBLE
(NORMAL / DOUBLE Recordings are OK)

Trouble in both Tracks 1 & 2:

SW108 is defective, bad contact or out of
position. (Pages 160 & 161)

RECORDING STATE IS KEPT ON EVEN WHEN
OFF BUTTON IS PUSHED

Trouble in Track 1:

SW108 (SPOT REC switch) shorts or out of position.
CN101-19/CN101-20/Remote connector short.
Wires of D110/SW108 touch to other parts.
Control circuit (periphery of Tr316-Tr319) is
defective.
D107/R171/SW101-7 (R-P switch) touch to the
other circuits.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above,
referring the Track 2 Circuit.

CHANGEOVER FROM SPOT REC TO FWD PROJECTION IS
IMPOSSIBLE EVEN BY TURNING SPOT REC BUTTON TO
OFF POSITION

(It is possible by operation of OFF button)

Trouble in Track 1:

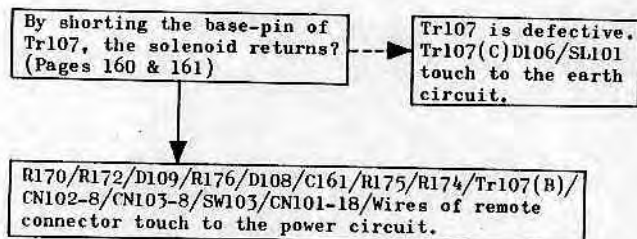
SW107 (READY-OFF switch) shorts.
CN101 touches to the other parts.
Wiring of remote connector is bad.
Control circuit (periphery of Tr316-Tr319) is
defective.
D107/R171/SW101-7 touch to the other circuits.
(Pages 160 & 161)

Trouble in Track 2:

Check the similar points to the above,
referring to the Track 2 Circuit.

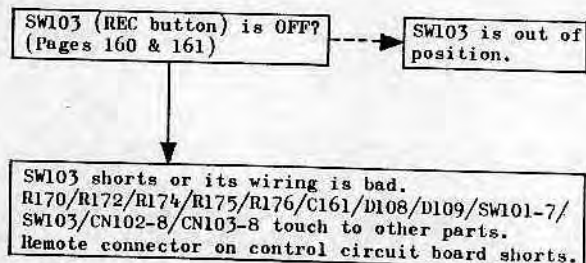
R-P SOLENOID WORKS AS SOON AS POWER SWITCH TURNS ON

Trouble in Track 1:



R-P SOLENOID WORKS AS SOON AS SW107 IS SET TO "READY" OR SW105 IS SET TO "M" POSITION

Trouble in Track 1:



Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

Trouble in Track 2:

Check the similar points to the above, referring to the Track 2 Circuit.

AMPLIFIER FUSE (F502) BURNS OUT

